

Lessard-Sams Outdoor Heritage Council

Lake Nokomis Shoreline Enhancements for Turtles and Pollinators, Phase 3

ML 2025 Request for Funding

General Information

Date: 06/03/2024

Proposal Title: Lake Nokomis Shoreline Enhancements for Turtles and Pollinators, Phase 3

Funds Requested: \$950,000

Confirmed Leverage Funds: \$188,500

Is this proposal Scalable?: No

Manager Information

Manager's Name: Adam Arvidson Title: Project Manager Organization: Minneapolis Parks and Recreation Board Address: 2117 West River Road N City: Minneapolis, MN 55411 Email: aarvidson@minneapolisparks.org Office Number: 612-230-6470 Mobile Number: Fax Number: Website:

Location Information

County Location(s): Hennepin.

Eco regions in which work will take place:

• Metro / Urban

Activity types:

• Enhance

Priority resources addressed by activity:

• Habitat

Abstract

MPRB requests \$950,000 to continue shoreline habitat enhancements at Lake Nokomis in Minneapolis. This project constitutes the final 4,500 linear feet of this lake's shoreline enhancement. Two phases totaling 8,500 linear feet were previously funded by LSOHC. Completion of Phase Three would ensure naturalization of the entirety of this urban lakeshore. Habitat improvements would specifically target multiple turtle species and native plant species beneficial to pollinators.

Design and Scope of Work

In 2020, the Minneapolis Park and Recreation Board (MPRB) completed a project that restored approximately 4500 linear feet of shoreline around Lake Nokomis, a large recreational lake in south Minneapolis. That project regraded eroded banks, removed some hard armored shoreline, eliminated invasive species, and planted acres of native upland and emergent plants. Though still early in its life, this restoration project is already well loved by the community and has introduced key native species beneficial to pollinators. Plants like butterfly and whorled milkweed, yarrow, and purple coneflower now attract warblers, monarchs, and other pollinators to a landscape that was formerly mown turf. Designated fishing access points allow for public recreation that minimizes erosion and coexists with the habitat benefits.

Despite these benefits, however, the Phase One LSOHC-funded project only restored approximately one-third of the lakeshore. MPRB is thankful to LSOHC for providing subsequent funds for a Phase Two project in 2023. That funding will also restore one-third of the lake's shoreline. This year's Phase Three request is for the final unfunded 4,500 feet of shoreline. The un-enhanced Nokomis shoreline is heavily hard-armored, with lawn reaching right up to the water's edge and the lake reaching around behind failed stone walls. In addition to the re-grading, planting, and shore access points that were part of Phase One, the Phase Two and Three projects will also focus on the needs of several species of native turtles. The project will incorporate protected sandy nesting areas that appeal to softshell species, and will include amenities for basking turtles, such as low rocks and dead snags in the water.

According to the original land survey map of Hennepin County prior to the development of the Minneapolis, Lake Nokomis was originally a shallow lake. It was likely full of emergent vegetation and was an effective spawning ground for fish and nesting area for turtles. Dredging in the early 1900's disturbed Nokomis's littoral habitat. The concurrent construction of the storm sewer conveyance system added nutrients and sediment to the lake and nearby Minnehaha Creek. Park development removed native vegetation in favor of lawn. In 2016 MPRB adopted a Master Plan for Lake Nokomis that envisions conversion of the park area to 50% native landscape (up from about 10% of the park today). The lakeshore is a key piece of that. Through the Master Plan and on the heels of the successful Phase One project, the public strongly supports more naturalization and more habitat.

Put most simply, this project would fully convert an urban, lawn-dominated, hard-armored lakeshore into a restored ecosystem of prairie and aquatic plants with ample habitat opportunities for birds, insects, and nesting turtles.

Explain how the proposal addresses habitat protection, restoration, and/or enhancement for fish, game & wildlife, including threatened or endangered species conservation

This project will target two specific categories of wildlife, with follow-on benefits for a third.

Softshell turtles, specifically spiny softshells, have been sighted in Lake Nokomis but there is no evidence of

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nesting. Nearby, at Lake Hiawatha, spiny softshells have nested and are more frequently seen. An ongoing scientific study of turtles in the Minneapolis park system (commissioned by MPRB and performed be researcher Jenny Winkelman) suggests that the hard-armored shoreline of Lake Nokomis is likely preventing nesting by softshells. This is because softshell turtles tend to nest near shore and desire sandy areas. Because this tendency protects them from interaction with roadways, this is a turtle that can be well supported through shoreline restoration alone. The project's removal of hard-armored shoreline, incorporation of native plans and soil restoration, and inclusion of specific protected sandy nesting areas will benefit spiny softshell turtles, as well as several other turtle species known to be present and nest at Lake Nokomis, including snapping and painted, as well as others that could arrive, such as false map and Blanding's.

The second category of wildlife benefit are migratory birds and insect pollinators. The restoration of a diverse native flora will provide forage and shelter. The mix of this prairie-like landscape with nearby savanna and woodlands will specifically benefit several bird species identified by the Audubon Society in its Priority Birds of 2021 and with limited sightings at Lake Nokomis: Louisiana waterthrush (sightings in area), hooded warbler (one sighting in 2020), prairie warbler (sightings in area), rose-breasted grosbeak (periodic sightings), wood thrush (sightings in immediate vicinity), and scarlet tanager (regular sightings nearby, but few at Nokomis).

Lastly, the establishment of natural shoreline and removal of hard-armoring will benefit water quality and multiple game and non-game fish species, ranging from bluegill to muskellunge. Lake Nokomis has a varied bathymetry with shallow bays and deep holes, allowing for a wide variety of fish habitats. Recent carp removal work funded by ENRTF has begun to rebalance the food chain in the lake. The proposed shoreline enhancement, including dead snags loved by young fish, is an important next step.

What are the elements of this proposal that are critical from a timing perspective?

The Phase One project is complete and has been well received by the public. MPRB staff, consultants, and contractors developed expertise during that effort and are ready to extend the work to the full lake. Most of the longer more open stretches of shoreline lie along the southeastern and southwestern shorelines, which are currently inaccessible to turtles due to hard-armoring. Implementing Phase Two and Three projects simultaneously and on the heels of Phase One shows a commitment to environmental restoration in an urban environment that may be unmatched in the metro area. Great efficiencies can be gained from proceeding immediately with knowledge base in place. Acting now will allow more funds to be directed to actual restoration, by building on very recent community engagement and construction plan development.

Describe how the proposal expands habitat corridors or complexes and/or addresses habitat fragmentation:

Lake Nokomis is part of the Minneapolis Grand Rounds, an interconnected system of waterways and landscape corridors that connects across the entire city. Lake Nokomis is connected by uninterrupted green space to Lake Hiawatha (an important natural habitat lake), the Chain of Lakes, the deep forests of Wirth Park, and the Mississippi River via Minnehaha Creek. Restoring the Nokomis shoreline will create habitat connectivity spanning more than 100 miles of creek, lake, and river shoreline stretching north of downtown Minneapolis and south through Saint Paul.

Which top 2 Conservation Plans referenced in MS97A.056, subd. 3a are most applicable to this project?

- Minnesota DNR Strategic Conservation Agenda
- State Comprehensive Outdoor Recreation Plan

Explain how this proposal will uniquely address habitat resilience to climate change and its anticipated effects on game, fish & wildlife species utilizing the protected or restored/enhanced habitat this proposal targets.

Like many urban lakes, Lake Nokomis can be "flashy," meaning its water level fluctuates greatly due to urban runoff. This flashiness has in part damaged existing armored shoreline and can make habitat options unpredictable. A restored shoreline like that implemented in Phase One is more resilient to fluctuating water levels, because the gradual slopes and native vegetation are better suited to different water levels. For Phase Three (and Two), turtle nesting beaches can be designed with adequate elevation change to keep them accessible at any water level. In addition, heavily vegetated shorelines can limit the re-suspension of phosphorous when shorelines are impacted by fluctuating water levels. This contributes to overall improved water quality in the lake, for both recreation and habitat.

Which LSOHC section priorities are addressed in this proposal?

Metro / Urban

• Protect habitat corridors, with emphasis on the Minnesota, Mississippi, and St. Croix rivers (bluff to floodplain)

Describe how this project/program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife, and if not permanent outcomes, why it is important to undertake at this time:

The LSOHC vision for the Metro Area includes the statement: "streams, rivers and lakes will be protected by vegetative buffers and bank stabilization along riparian areas." This project seeks to specifically restore the entire shoreline of an urban lake that is connected to the Mississippi River and other habitat areas via Minnehaha Creek. The project is expected to specifically benefit turtle species and pollinator plants, but the efforts to stabilize the shoreline, re-establish aquatic vegetation, and remove hard-armored banks will greatly benefit game and non-game fish. Drawing on the success of the Phase One project at Lake Nokomis, and committed funding for Phase Two, this Phase Three project will also include designated fishing access points. These allow use of the lake by anglers while protecting the ecosystem from erosion. Lake Nokomis is an important recreational lake for boating, swimming, and fishing. All these uses will continue and will be enhanced through improved habitat and water quality.

Outcomes

Programs in metropolitan urbanizing region:

• Improved aquatic habitat indicators ~ Increased diversity and quantity of native aquatic plants will be assessed through annual point-intercept plant surveys. Ongoing turtle surveys will determine effectiveness of new habitat areas for nesting and food production. Regular water sampling will provide nutrient loading information.

What other dedicated funds may collaborate with or contribute to this proposal?

• N/A

Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

This request neither supplants nor substitutes previous non-Legacy funds. The Phase One and Phase Two projects received Legacy Funds and would not have happened but for them. The same is true for this requested Phase Three project.

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

The stewardship plan for enhanced habitat at Lake Nokomis will be led by MPRB environmental stewardship staff. Their primary focus will be to continue to remove invasive tree and herbaceous species from the shoreline, monitor and repair any recurring erosion, and monitor and repair shoreline restoration areas as needed. MPRB may contract with Conservation Corps Minnesota and will also utilize its own youth employment program, Teen Teamworks, to help with invasives removals. Teen Teamworks is a youth employment program that helps teens and young adults develop job skills focused on maintenance and natural resource management. Water resources staff will also conduct aquatic plant surveys. Volunteers from the Nokomis East Neighborhood Association and the Friends of Lake Nokomis will help sustain the enhanced habitat. After conclusion of the five-year grant, MPRB will continue to maintain and improve lake habitat.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2029 and thereafter	MPRB General	continued	continued water	-
	Operating	maintenance of	sampling	
		shoreline restoration		
		areas		

Provide an assessment of how your program may celebrate cultural diversity or reach diverse communities in Minnesota, including reaching low- and moderate-income households:

Lake Nokomis and the recreational areas around it are part of the Regional Park system, which attracts a wide demographic range of users. Though park use data that is disaggregated by race is not available, general knowledge suggests that Lake Nokomis is used by a higher percentage of BIPOC families and individuals than would be expected based on the demographics of the neighborhoods around the lake. This is attributable to the existence of a wide range of recreational options in close proximity. A Metropolitan Council study found that BIPOC families preferred spaces where large gathering areas were nearby other recreational options like swimming, trails, impromptu sports fields, and fishing opportunities. This is true at Lake Nokomis, especially near the Main Beach.

This project will engage and benefit BIPOC park users in two ways. First, MPRB will continue its regular community engagement strategy to connect with diverse park users. Every MPRB capital project begins with a community engagement plan and regularly evaluates outcomes against that plan. MPRB expects to engage with diverse park users and stakeholders during the design of the project. Second, the project itself will benefit the BIPOC users of the park, which, as described above, are numerous. In particular, the lake sees high use by Latinx, Black, and East African families during weekend gatherings and celebrations, and also by Asian individuals and families who tend to shore fish all around the lake. The project will improve fish habitat and angling access (and thereby fishing success), and also water quality for swimming and boating.

Activity Details

Requirements

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?

Yes

Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 or on lands to be acquired in this program? Yes

Where does the activity take place?

- County/Municipal
- Public Waters

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program, either by the proposer or the end owner of the property, outside of the initial restoration of the land? No

Will insecticides or fungicides (including neonicotinoid and fungicide treated seed) be used within any activities of this proposal either in the process of restoration or use as food plots? No

Other OHF Appropriation Awards

Have you received OHF dollars through LSOHC in the past? Yes

> **Are any of these past appropriations still OPEN?** Yes

Approp Year	Funding Amount Received	Amount Spent to Date	Funding Remaining	% Spent to Date	
2023	\$755,000	-	-	-	
Totals	\$755,000	-	\$755,000	0.0%	

Timeline

Activity Name	Estimated Completion Date
Restore and enhance 4500 linear feet of riparian habitat	2026
(2025-2026)	
Monitor and evaluate results annually through fish and plant	2029
surveys	

Budget

Totals

Item	Funding Request	Total Leverage	Leverage Source	Total
Personnel	-	\$188,500	MPRB General	\$188,500
			Operating & Teen	
			Teamworks, MPRB	
			General Operating	
Contracts	\$880,000	-	-	\$880,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement	-	-	-	-
Stewardship				
Travel	-	-	-	-
Professional Services	\$70,000	-	-	\$70,000
Direct Support	-	-	-	-
Services				
DNR Land Acquisition	-	-	-	-
Costs				
Capital Equipment	-	-	-	-
Other	-	-	-	-
Equipment/Tools				
Supplies/Materials	-	-	-	-
DNR IDP	-	-	-	-
Grand Total	\$950,000	\$188,500	-	\$1,138,500

Personnel

Position	Annual FTE	Years Working	Funding Request	Total Leverage	Leverage Source	Total
Water Quality Staff	0.07	5.0	-	\$35,000	MPRB General Operating	\$35,000
Landscape Architect/Project Manager	0.15	5.0	-	\$75,000	MPRB General Operating	\$75,000
Youth Crew Supervisor	0.1	5.0	-	\$17,500	MPRB General Operating & Teen Teamworks	\$17,500
Youth Worker(s)	0.65	5.0	-	\$61,000	MPRB General Operating & Teen Teamworks	\$61,000

Amount of Request: \$950,000 Amount of Leverage: \$188,500 Leverage as a percent of the Request: 19.84% DSS + Personnel: -As a % of the total request: 0.0% Easement Stewardship: -As a % of the Easement Acquisition: -

-	otal Leverage (from ove)	Amount Confirmed	% of Total Leverage	Amount Anticipated	% of Total Leverage
	\$188,500	\$188,500	100.0%	-	0.0%
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Detail leverage sources and confirmation of funds:

Leveraged funds include all Minneapolis Park and Recreation Board staff time necessary to manage the entirety of the project, including environmental review, permitting, community engagement, and design/construction oversight. The source of these funds is the MPRB General Fund, which comes primarily from the local tax levy.

Does this proposal have the ability to be scalable?

No

Please explain why this project can NOT be scaled:

This is the final phase of shoreline enhancement. MPRB's previous Phase Two request was halved, which necessitates this Phase Three. A smaller project scope at this point will be difficult to implement and will have a low cost/benefit ratio.

Contracts

What is included in the contracts line?

The contracts line includes the primary construction contract for installing the shoreline restoration work. Work is likely to include excavation and grading, invasive tree removal, soil preparation, planting, stone placement, planting protection, and maintenance during the establishment period. The Minnesota Conservation Corps will be contacted to perform applicable work.

Professional Services

What is included in the Professional Services line?

• Design/Engineering

Federal Funds

Do you anticipate federal funds as a match for this program? No

Output Tables

Acres by Resource Type (Table 1)

Туре	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	0	0	5	5
Total	0	0	0	5	5

Total Requested Funding by Resource Type (Table 2)

Туре	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	\$950,000	\$950,000
Total	-	-	-	\$950,000	\$950,000

Acres within each Ecological Section (Table 3)

Туре	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	5	0	0	0	0	5
Total	5	0	0	0	0	5

Total Requested Funding within each Ecological Section (Table 4)

Туре	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	\$950,000	-	-	-	-	\$950,000
Total	\$950,000	-	-	-	-	\$950,000

Average Cost per Acre by Resource Type (Table 5)

Туре	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	\$190,000

Average Cost per Acre by Ecological Section (Table 6)

Туре	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$190,000	-	-	-	-

Target Lake/Stream/River Feet or Miles

4500 lake shoreline feet

Parcels

Sign-up Criteria?

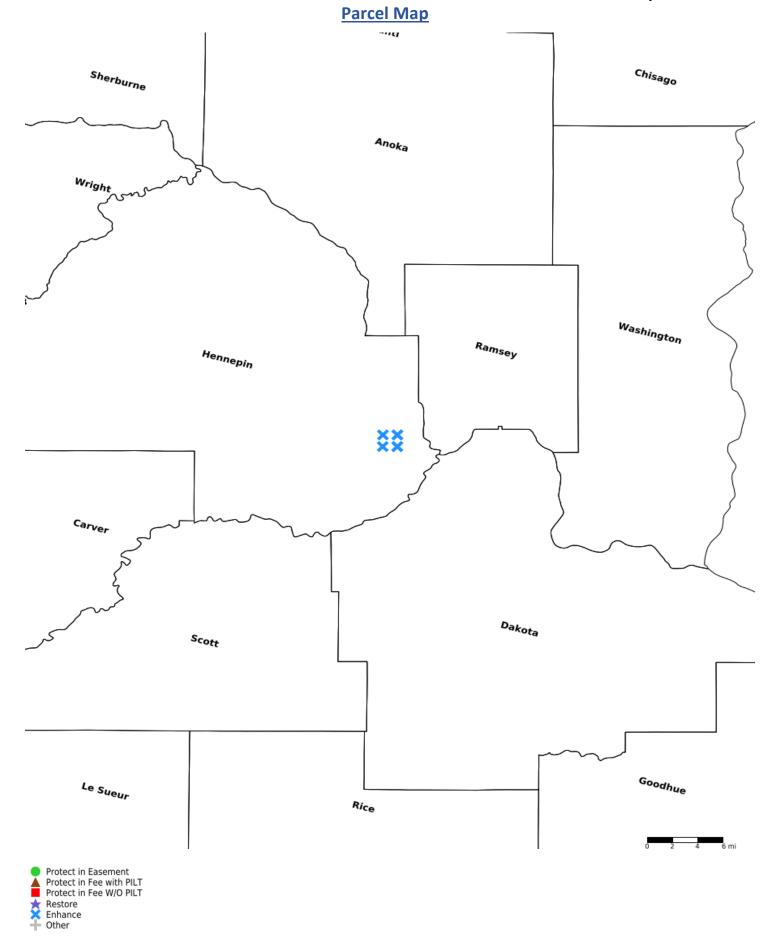
No

Explain the process used to identify, prioritize, and select the parcels on your list:

These parcels constitute the shoreline of Lake Nokomis to be included in the Phase Two and Three projects.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection	Description
2402824210001	Hennepin	02824224	9	-	Yes	Public parkland and lakeshore with limited existing habitat
2402824230010	Hennepin	02824224	16	-	Yes	Public parkland and lakeshore with limited existing habitat
2302824110001	Hennepin	02824223	34	-	Yes	Public parkland and lakeshore with limited existing habitat
1402824440002	Hennepin	02824214	10	-	Yes	Public parkland and lakeshore with limited existing habitat
1302824430001	Hennepin	02824213	13	-	Yes	Public parkland and lakeshore with limited existing habitat
1302824230001	Hennepin	02824213	68	\$785,600	Yes	Public parkland and lakeshore with limited existing habitat





MINNEAPOLIS PARK AND RECREATION BOARD

AN ACTION, RESOLUTION OR ORDINANCE

In accordance with Article VI, Section 6.2(j), of the City Charter, there is herewith submitted to you, the Mayor of the City of Minneapolis, an action, resolution or ordinance adopted by the Minneapolis Park and Recreation Board which you may approve by affixing your signature herein below or if you disapprove of same to return to the Board, with your objection thereto, by depositing the same with the Secretary of the Board to be presented to the Board at their next meeting where the question of its passage will be put again before the Board.

IX.B.5

Resolution 2024-47

RESOLUTION AUTHORIZING THE SUPERINTENDENT TO SUBMIT A 2025 PROPOSAL TO THE LESSARD-SAMS OUTDOOR HERITAGE COUNCIL (LSOHC) FOR PHASE THREE SHORELINE ENHANCEMENTS AT LAKE NOKOMIS, PART OF NOKOMIS-HIAWATHA REGIONAL PARK

PASSED March 20, 2024



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of the Bo Mayor

Offered by: Charles Rucker Seconded by: Steffenc Misth

Resolution 2024-47

RESOLUTION AUTHORIZING THE SUPERINTENDENT TO SUBMIT A 2025 PROPOSAL TO THE LESSARD-SAMS OUTDOOR HERITAGE COUNCIL (LSOHC) FOR PHASE THREE SHORELINE ENHANCEMENTS AT LAKE NOKOMIS, PART OF NOKOMIS-HIAWATHA REGIONAL PARK

Whereas, The Minneapolis Park and Recreation Board (MPRB) is the steward of Minneapolis parks and is authorized to seek funding from outside sources;

Whereas, The Lessard-Sams Outdoor Heritage Council (LSOHC) has not yet released a 2024 Request for Proposals for Minnesota's Outdoor Heritage Fund, a portion of the 2008 Clean Water Land and Legacy Amendment, but MPRB staff expect this will occur in the very near term;

Whereas, MPRB competed a project to restore and enhance the ecological and habitat function of 4500 linear feet of Lake Nokomis shoreline, a project funded with \$444,000 from LSOHC in 2015;

Whereas, MPRB has been approved for funding for its proposed Lake Nokomis Phase Two Shoreline project, which originally requested an amount that would have completed restoration of the entire lake shoreline, but was reduced to an amount that will fund approximately one-third of the lake's total shoreline;

Whereas, MPRB wishes to continue the effort to enhance Lake Nokomis shoreline, specifically to benefit several turtle species that currently or could nest in the park;

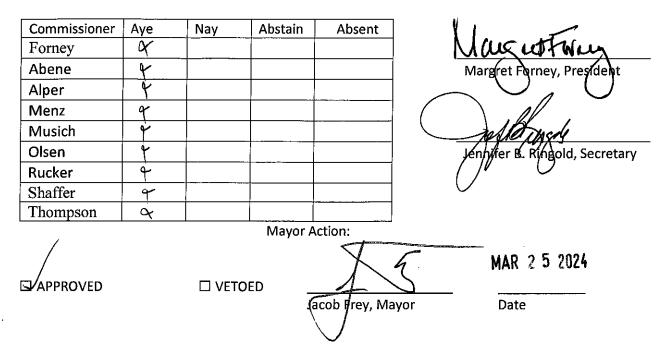
Whereas, This proposal would be considered Phase Three of the Lake Nokomis shoreline restoration, is supported by the Nokomis-Hiawatha Regional Park Master Plan, and is desired by the community; and

Whereas, This resolution is supported by Parks for All, the MPRB Comprehensive Plan 2021-2036 through Goal 2: "Steward a continuum of recreation and nature," Goal 6: "Strengthen ecological connections," and Goal 9: "Operate a financially sustainable enterprise;"

RESOLVED, That the Board of Commissioners authorizes the Superintendent to submit a 2025 proposal to the Lessard-Sams Outdoor Heritage Council (LSOHC) for Phase Three Shoreline Enhancements at Lake Nokomis, part of Nokomis-Hiawatha Regional Park; and

RESOLVED, That the President of the Board and Secretary to the Board are authorized to take all necessary administrative actions to implement this resolution.

Resolution No. 2024-47 Page 1 of 2



Adopted by the Minneapolis Park and Recreation Board In formal meeting assembled on March 20, 2024